PND70

A COMPARISON OF STATED PREFERENCES FOR INJECTABLE DISEASE-MODIFYING TREATMENTS FOR MULTIPLE SCLEROSIS: COMPLIANT VS. NON-COMPLIANT PATIENTS

Poulos C[1], Kinter E[2], Posner J[1], Van Beek J[2]

[1]*RTI Health Solutions, Research Triangle Park, NC, USA,* [2]*Biogen, Zug, Switzerland*

OBJECTIVES: Medication compliance with injectable disease-modifying treatments (DMTs) for multiple sclerosis (MS) is sub-optimal, with published compliance rates ranging from 27% to 83%. This study quantified MS patients' preferences for features of injectable DMTs, and examined whether non-compliant patients have different preferences than compliant patients. **METHODS:** Adults with self-reported physician-diagnoses of MS in Germany (N=189), the United Kingdom (UK) (N=100) and France (N=100) completed an online discrete choice experiment survey. Treatment-experienced respondents reported their level of compliance with their current (or most recent) MS medicine and two groups were created: compliant respondents (who reported always taking medicine exactly as prescribed) and non-compliant respondents (who reported missing less than half, about half, or more than half of doses). Respondents were presented with a series of nine treatment-choice questions wherein hypothetical treatments were described in terms of six attributes. Mixed-logit regression parameters were used to calculate preference weights, or utilities, of attribute levels and relative importance or, utility differences, of changes in attributes for both the compliant and non-compliant respondents. Wald- and t-tests of the differences in preferences were conducted. **RESULTS:** In Germany, the UK and France, 81%, 37%, and 73% of the sample reported being compliant, respectively. The relative importance of delaying disability progression for 3 years was 2.7 times more important among the compliant group than the non-compliant group in Germany and the UK ($P<0.05$) and 1.1 times more important in France. Among compliant respondents, improvements in injection frequency (from 30 to 2 injections per month) relative to this improvement in efficacy were 1.5, 6.0, and 2.6 times more important to the non-compliant group than the compliant group in Germany, the UK, and France. **CONCLUSIONS:** Reductions in injection frequency are relatively more important to non-compliant MS patients than to compliant patients, while delaying disability progression was relatively more important to compliant MS patients.

PND71

US RRMS PATIENT PREFERENCES FOR MULTIPLE SCLEROSIS TREATMENTS: AN ONLINE SURVEY

Mansfield CA[1], Thomas N[2], Gebben D[1]

[1]*RTI Health Solutions, Research Triangle Park, NC, USA,* [2]*Genentech, Inc., South San Francisco, CA, USA*

OBJECTIVES: To estimate patient preferences for relapsing-remitting multiple sclerosis (RRMS) treatments **METHODS:** Patients in the United States who reported receiving a diagnosis of MS from their physician completed a Web-based discrete-choice experiment (DCE) survey that included questions on treatment experience and adherence. The survey presented 10 DCE questions in which respondents were asked to choose between pairs of hypothetical MS treatment profiles. The profile attributes of the treatments were informed by a literature search and clinician input, and tested in patient interviews. Attributes included: change in MS progression and years between relapses; risk of serious infection; delivery method and frequency of administration; and chance of flu-like and gastrointestinal (GI) symptoms. The profiles in the DCE questions were based on an experimental design with known statistical properties. Random-parameters logit was used to estimate preferences. **RESULTS:** The sample included 301 patients with RRMS: 81% were female; mean age was 54 years; 56% rated their disability level as "normal" or "mild"; and 79% reported currently receiving a prescription MS treatment. Nineteen percent reported stopping or skipping treatment doses due to flu-like symptoms and 9% due to GI symptoms. Respondents placed the greatest decision weight on reducing the chance of MS progression and risk of serious infection, as well as on the mode and frequency of administration. Followed by daily pills, an intravenous (IV) administration every 6 months was preferred over IV every month and injections 3 times per week ($P < 0.05$). Respondents reported being most likely to adhere to either daily pills or IV administration every 6 months (39% and 29% of patients, respectively). **CONCLUSIONS:** Patients with RRMS reported that treatment preferences were influenced by efficacy, reduced side effects, and less burdensome modes of administration. Side effects and mode of administration also influenced reported likelihood of treatment adherence.

PND72

PREFERENCES OF PATIENTS WITH MULTIPLE SCLEROSIS FOR ATTRIBUTES OF DISEASE MODIFYING DRUGS IN DECISION-MAKING: A NOMINAL GROUP TECHNIQUE AND BEST-WORST SCALING

Kremer IE[1], Evers SM[1], Jongen PJ[2], Dowie J[3], van der Weijden T[1], van de Kolk I[4], Hiligsmann M[1]

[1]*Maastricht University, Maastricht, The Netherlands,* [2]*MS4 Research Institute, Nijmegen, The Netherlands,* [3]*London School of Hygiene and Tropical Medicine, London, UK,* [4]*Zuyd University, Maastricht, The Netherlands*

OBJECTIVES: More than 10 disease modifying drugs (DMDs) are available for relapsing-remitting multiple sclerosis (RRMS) and clinically isolated syndrome (CIS). Poor adherence to DMDs often results in suboptimal (cost-)effectiveness. Understanding patients' preferences for DMD and incorporating them in clinical decision-making can contribute to adherence to DMDs. This study aims first to identify the full spectrum of DMD attributes and second to quantify their relative importance among patients. **METHODS:** First, 3 focus groups with RRMS patients were conducted using a nominal group technique to explore attributes for decision-making. Through individual generation and discussion of attributes, a full list was created and patients selected their 10 most important attributes. Second, a best-worst scaling (BWS) was conducted in a larger RRMS/CIS patient group to prioritize attributes. Attributes' mean relative importance scores (RIS) were obtained with Hierarchical Bayes analysis. **RESULTS:** Nineteen patients participated in the focus groups. A list of 34 attributes was derived of which 7 were excluded from the BWS because they were never included in the top 10. Next, 185 patients evaluated the importance of 27 attributes in the BWS. Effect on disease progression was most important (RIS=9.6), followed by quality of life (9.2), relapse rate (7.8), severity of side effects (7.6), relapse severity (7.4), current MS symptoms (7.3), plaque development (7.3), and safety (6.0). Effect on disease progression was 1.8 times more important than influence on lifestyle (5.3). Subgroup analysis showed that DMD naïve patients found side effect-related attributes far more important than DMD experienced patients. **CONCLUSIONS:** Using a thorough method, this study reveals that patients value effectiveness and unwanted effects most. Also, heterogeneity was observed in different subgroups. Clinicians should be aware of the average preference values and that DMD attributes are valued differently by different patients. Person-centred clinical decision-making would be needed and requires elicitation of individual preferences.

PND73

USING A MIXED METHODS APPROACH TO DEVELOP A DISCRETE CHOICE EXPERIMENT IN MULTIPLE SCLEROSIS

Padania S[1], Bottomley CJ[2], Adlard N[3], Watson J[3], Lloyd AJ[4]

[1]*Open Plan (an Open Health company), Marlow, UK,* [2]*pH Associates (an Open Health company), Marlow, UK,* [3]*Novartis Pharmaceuticals UK Ltd, Camberley, UK,* [4]*Bladon Associates, Oxford, UK*

OBJECTIVES: NICE has suggested that patient preference plays a role in physician selection of some Multiple Sclerosis (MS) treatments, but existing patient preference surveys are developed using literature rather than patient input. Aims of this study were: combine existing literature with patient interviews to develop a discrete choice experiment (DCE) to assess patient preference for MS treatments and compare and contrast this information to critically appraise the mixed methods approach. **METHODS:** A literature review was conducted to understand patient preference for attributes of existing MS treatments and inform development of a DCE. 12 one-to-one telephone interviews were conducted with MS patients. Interviews comprised two parts; understanding treatment attributes of importance to patients, and detailed cognitive appraisal of the DCE. Team-based framework analysis was conducted using interview audio files. **RESULTS:** Literature and patients interviewed generally agreed on key treatment attributes. Although brain lesions were identified from literature as a clinical marker, only one patient expressed this as important and others either did not understand it or the information was not shared by their clinician. In agreement with literature, patients shared that side effects impacting their quality of life were most important, for example fatigue and infection. Feedback on the DCE highlighted the importance of consistency between the wording length of the attribute level descriptions; patients considered longer descriptions correlated with a 'worse' level. Interviews also identified questions where language refinement was required to improve comprehensiveness. Patients had little knowledge of disease severity scores contrary to suggestions in the literature, but as disease severity was an important concept, this definition was changed. **CONCLUSIONS:** Combining patient interviews and existing literature to develop a DCE can have advantages over using literature alone: greater confidence that attributes are important to patients, early refinement of language and an understanding of patients' thought processes during DCE completion.

PND74

THE INTERNATIONAL DEVELOPMENT OF THE MODIFIED HYPERPHAGIA QUESTIONNAIRE

Crawford SR[1], Brown TM[2], Fehnel SE[2], Doward L[1], Nelson L[2], Chen A[3], Kim T[3], Roof E[4], Dykens EM[4]

[1]*RTI Health Solutions, Manchester, UK,* [2]*RTI Health Solutions, Research Triangle Park, NC, USA,* [3]*Zafgen, Inc., Boston, MA, USA,* [4]*Vanderbilt University, Nashville, TN, USA*

OBJECTIVES: The caregiver-completed Hyperphagia Questionnaire (HQ) is commonly used to assess food-seeking behaviours in Prader-Willi syndrome (PWS). A modified version, the HQ for Clinical Trials (HQ-CT), was developed and adapted for use in multinational PWS clinical trials. **METHODS:** The 13-item HQ was reviewed and modified based on industry and regulatory standards. The preliminary HQ-CT was included in a phase 2 trial; data analysis informed psychometric evaluation and optimal scoring. Further refinements were made following Food and Drug Administration (FDA), clinical reviews, and interviews with PWS caregivers in the United States (US). The final 9-item HQ-CT was culturally adapted to 10 European languages using industry standards for forward-back translation, followed by cognitive debriefing interviews (CDIs) with PWS caregivers in target countries to assess content validity. **RESULTS:** Review of the 13-item HQ removed three items to limit content to observable behaviours that could change after treatment. Analysis of trial data provided support for an HQ-CT composite score (e.g., alpha coefficients ≥ 0.85), as well as the measure's validity and responsiveness. One item was removed based on FDA recommendation, yielding a 9-item HQ-CT. Interviews with 6 PWS caregivers in the US supported content validity. CDIs conducted with 5 PWS caregivers (native-language speakers and target-country residents) tested each of the new language translations. Interview samples included male and female caregivers, except for the United Kingdom-English and the Netherlands-Dutch samples (females only). Respondent ages ranged from 23 to 64 years across all countries. European caregivers found the HQ-CT content relevant and clear. However, there was some difficulty understanding the term 'hyperphagia'; additional text was added to clarify this word. **CONCLUSIONS:** The development of the HQ-CT and its adaptation to 10 European languages, with input from 56 caregivers, has produced a valuable instrument for assessing food-seeking behaviours in PWS clinical trials in the US and Europe.

PND75

ASSOCIATION BETWEEN SELF-ADMINISTERED EXPANDED DISEASE SEVERITY SCALE (EDSS) AND MULTIPLE SCLEROSIS IMPACT SCALE (MSIS-29): RESULTS FROM THE BURDEN OF ILLNESS IN PATIENTS WITH MULTIPLE SCLEROSIS IN FINLAND (DEFENSE) STUDY

Viita A[1], Hämäläinen P[2], Ruutiainen J[2], Hahl J[3], Nissinen H[1]

[1]*Novartis Finland Oy, Espoo, Finland,* [2]*Masku Neurological Rehabilitation Centre, Masku, Finland,* [3]*AT Medical Affairs Consulting Oy (Medaffcon), Espoo, Finland*